

(12) **United States Patent**  
**Golomb**

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(54) **SAFETY BURNER SYSTEM WITH  
AUTOMATIC SHUT-OFF**

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CPC ..... **F24C 3/122** (2013.01); **F23D 14/72**  
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(57) **ABSTRACT**

A gas burner safety system comprises dual sensor arrays, the  
first array positioned proximal to the gas burner and the  
second array positioned proximal to a control used to turn on  
and of and regulate the flame of the gas burner. The first  
array senses the flame components such that a flame signa-  
ture is obtained when no object is placed on or above the  
flame and a flame image is obtained when an object is  
proximal to the flame. By comparing the flame signature and  
the flame image, a central control unit operatively connected  
to the sensor arrays can determine the presence or absence  
of an object proximal to the flame. The second sensor array  
is positioned to detect a human hand proximal to the control.  
In operation, if the flame image matches the flame signature  
and a human hand is not detected proximal to the control, the  
central control unit turns off the gas burner by causing the  
closure of a valve in the gas supply line to the gas burner.

**20 Claims, 3 Drawing Sheets**

